

**MINUTES**  
**CHIEF OF ENGINEERS' ENVIRONMENTAL ADVISORY BOARD MEETING**  
Vicksburg, MS  
July 19, 2006

1. The Chief of Engineers, **LTG Carl Strock**, called both the Environmental Advisory Board (EAB) and the Coastal Engineering Research Board (CERB) to order at 0830 hours, 19 July 2006 for a Joint Meeting of the two boards at the Engineer Research and Development Center's Coastal and Hydraulics Laboratory in Vicksburg, Mississippi.

The following EAB members were present:

- **Mr. Kenneth Babcock**, Director of Operations, Ducks Unlimited Southern Regional Office;
- **Dr. George Crozier**, Executive Director, Dauphin Island Sea Lab;
- **Dr. Michael Donahue**, Vice President, URS Corporation, Water Resources and Environmental Services;
- **Dr. Courtney Hackney**, Professor, Department of Biology and Marine Biology, University of North Carolina at Wilmington;
- **Dr. Mathias Kondolf**, Associate Professor, Department of Landscape Architecture and Environmental Planning, University of California at Berkeley; and,
- **Dr. Denise Reed**, Professor, Department of Geology and Geophysics, University of New Orleans;

Also present were: **MG William Grisoli**, Commander, North Atlantic Division and member of the CERB; **BG Michael Walsh**, Commander, South Atlantic Division and member of the CERB; **BG Gregg Martin**, Commander, Northwestern Division and member of the CERB; **Mr. Tom Waters**, Chief, Civil Works Planning and Policy, **Ms. Pat Rivers**, Chief, Southwestern Division Regional Integration Team and of the Environment Community of Practice (CoP); and **Ms. Rennie Sherman**, Executive Secretary for the EAB. Civilian CERB members present were: **Dr. Joan Oltman-Shay** (Northwest Research Associates), **Dr. Richard Seymour** (Scripps Institution of Oceanography), and **Dr. Bruce Taylor** (Taylor Engineering, Inc.).

## 2. WELCOMING REMARKS

**LTG Strock** welcomed everyone and said that he was pleased to have the two boards meet jointly to explore coastal issues. He said that both boards report to him in advisory capacities. The boards each have separate charges or initiatives that they are currently working on. This meeting will explore the extent to which collaboration and consideration might be practical in working on those initiatives and whether any joint initiatives may also be pursued. He emphasized that the goal of this meeting was to review and understand some of the most significant coastal environmental and engineering challenges facing the Corps and the Nation. He explained that the meeting was open to the public. He thanked the ERDC staff who helped organize the joint meeting of the boards.

## 3. PRESENTATIONS

A series of four presentations were made to the two boards, which are summarized below.

a. Strategic Overview of Interagency Performance Evaluation Task Force (IPET) and the Confluence of Coastal Engineering and Environment.

**Dr. John Jaeger**, Huntington District, said that the IPET Draft Report is undergoing internal review and that the National Research Council would be included in the final document.

**General Strock** said another effort underway will also help the Corps determine effective ways to respond to the hurricanes. The Institute for Water Resources (IWR) is preparing a decision chronology for New Orleans projects. General Strock indicated that such unforeseen events demonstrate a need for adaptive management, which is an issue challenging both boards.

b. Louisiana Coastal Protection and Restoration (LACPR).

**Mr. Edmond Russo**, ERDC Coastal and Hydraulics Laboratory, reported on the 6-month report of the subject study which was recently transmitted to Congress. The study, intended to be exclusive of normal policy consideration, was developing a risk-informed decision framework as part of a comprehensive hurricane protection and analysis study.

**Dr. Reed** asked what has Corps learned and applied from water management institutions from abroad.

**Mr. Russo** responded that the team had visited the Dutch who have a continual monitoring and risk reassessment similar to the Corps IPET applied on a five year reassessment interval with the intent of prioritizing any upgrades, rehabs and repairs to take care of potential vulnerabilities and fundamental changes to base factors – change in technology, subsidence, environmental conditions, and climate predictions.

c. Mississippi Coastal Improvement Project (MCPR)

**Mr. Douglas Otto, Jr.**, Mobile District, presented a briefing on the subject study. He indicated that the study, on the same schedule as the Louisiana Coastal Protection and Restoration Project, will recommend comprehensive measures, but can also recommend short-term projects before the Final Report is completed.

**Dr. Donahue** asked how the MCPR is integrating the LACPR, IPET and Risk Assessment elements of decision- making into the MCPR.

**Mr. Otto** –responded that they were coordinating and adopting LACPR findings and have the LACPR on the Project Delivery Team.

**Mr. Tom Waters** indicated that Corps Headquarters (HQ) has identified a coordinator to assure that the oversight of both studies is integrated

**Dr. Hackney** was concerned that government continues to allow people to rebuild in hazard zones. While politics allows people to rebuild in these zones, that does not represent smart coastal zone management.

**General Strock** said that the Corps can not make those land use decisions, but use of hazard zones by FEMA forces new building codes that influence rebuilding decisions. He indicated that he wanted a systems approach applied across common geomorphic areas and not along political boundaries, as represented by the LACPR and MCPR studies.

d. Science and Technology in Support of the Louisiana Coastal Area Ecosystem Restoration Program (LCA)

**Dr. Ellis Clairain**, ERDC Environmental Laboratory, discussed the Adaptive Management Action Plan, among other aspects of the program.

**Dr. Donahue** said that the EAB was engaged in assessing the Corps application of Adaptive Management to Ecosystem Restoration. He asked for a copy of the Adaptive Management Plan, embedded in the Science and Technology Support Center, for review.

**Mr. Babcock** stated that Hurricane Rita also resulted in coastal wetland loss and impact to waterfowl.

Therefore, it might be useful to undertake a study similar to the IPET. He commended the Corps on following its Environmental Operating Principles, and the EAB is ready to assist and guide the Corps in this endeavor.

**General Strock** said the LCA is a vehicle that allows adaptation to change, serves as a model to adopt changing technology, improves our knowledge, and gains the expertise to apply to a changing environment.

#### 4. CERB/EAB OPEN DISCUSSION

a. Regarding Adaptive Management:

**Dr. Seymour (CERB)** stated that the coastal engineering community has applied adaptive management throughout its history of shoreline protection. The community forecasts future conditions, design plans with expectations based on the forecast, monitors the results and modify and changes plans based on the responses, i.e., moves sand, reshapes slope, add sand. This adaptive management approach was adopted and codified by the NRC report on beach nourishment.

**Dr. Oltman-Shay (CERB)** affirmed the need to have adaptive management to continually reassess structure, climate, environment, and economic factors in the risk analysis. She asked how we change policy to insure continuing monitoring.

**General Strock** stated that the Science and Technology center is an element that supports adaptive management as it works to find and explore new technologies and apply those technologies to the field. The IWR decision chronology is a mechanism to change our approach to project management and get away from

static and locked study results. We want to respond to crisis events now, not study them and take corrective action thirteen years after the event.

**Mr. Babcock** stated that the 1993 Mississippi flood was created by levees built by the public. Some lands need to be reclaimed by the river and need to be restored. To that end, some communities were bought out. It is not a good idea to rebuild back into flood prone areas. He discussed adaptive management, stating that adaptive management is not just an environmental thing, but that it has origins was in business decision-making balancing risk and objectives, monitoring, research, and application. One needs to clearly state objectives upfront, and it is difficult with many multi-objectives and competing demands. But one cannot do it in isolation, and it is more difficult than we think.

b. Regarding Corps actions and land use practices:

**Dr. Hackney** stated that the Corps has failed to consider its influence on land use planning, which was encouraged by its projects, i.e., encouraging people to build in hazard zones, providing a false sense of security in its description of risk. He has not heard how state governments are thinking about the future, and rebuilding in vulnerable areas is unwise. States have not applied adaptive management in rebuilding.

**General Strock** agreed, indicating that the Corps could be faulted for encouraging development and that people need to understand risk or reduction of risk. But the Corps can only influence risk reduction (non – structural alternatives), citing examples such as not constructing a dam on the Delaware River to control flooding, and California building golf courses in arroyos to make use of land, but fully expecting to lose the golf course during a flood.

**Dr. Hackney** stated that Federal flood insurance and hazard zones provide a false sense of safety.

**General Strock** responded that the Corps can only provide risk and hazard information which can influence land use.

**Dr. Kondolf** followed saying that a false sense of security is illustrated by Ninth Ward where folks say it was okay to stay because government lets us live here. The Sacramento delta is full of development below sea level. We have a teachable moment, Katrina, which says “don’t do it”. Local government has no expertise and no will to control development and buyers don’t get it (the risk)

**General Strock** said that government’s obligation is to inform people. Government needs to better describe risk and not dumb it down where it confuses the real message.

**Dr. Crozier** opined that coastal engineers can construct structures to withstand anything, industrial strength, where reduction of uncertainty is high. It seems that the trust in our ability to design the structures is based on population willingness to pay.

**General Strock** said that engineers attempt to achieve economic /environmental balance amongst alternatives.

c. Regarding changing policy – How we make decisions

**Dr. Oltman-Shay** said that Katrina is an example where we do not have that kind of flexibility.

**General Strock** said that Univ. California Berkeley, Louisiana State University, and IPET studies are looking into other reasons for failure. But the LACPR is an opportunity to change the policy.

**Dr. Taylor (CERB)** said that major infrastructure is in-place for decades, and we have not gone back to reassess facility changes. We need to go back and reassess risks at the existing structures and let public know about high risks.

**General Strock** agreed, citing engineering originally in one dimension, but existence of technologies today that allow us to model in three dimensions. We should go back and reassess the designs, which were based on old technology.

**Dr. Taylor** stated that the Corps needs to do a better job of communicating advances in engineering and needs to get the information out to the engineering community of practice.

**General Strock** agreed, stating that the Corps is losing its technical capability. The boards need to provide him advice on how to build and maintain the capability.

d. Regarding regional sediment management

**Dr. Reed** stated that ecosystem attributes and engineering designs can be changed to benefit the environment. Regional sediment management should be used as pro-active rather than reactive to operation and maintenance. One needs aggressive action to use sediment lost to the ocean and to understand sediment.

**General Strock** said the Corps is frustrated by the project-centric processes of project approval and funding and needs to break the project-centric vision.

e. The Way Ahead

**General Grisoli** stated that it appeared as if the two boards have two potential areas for collaboration and trading of ideas -- Adaptive Management and Regional Sediment Management. He continued saying that The Ocean Action Plan may provide a format to use to shape the Corps Engineering Regulations and strategic plans and also a format to work as a team. General Grisoli continued saying that The CERB is developing a response to The Ocean Action Plan, including a focus on regional sediment management and that he believed it would be beneficial to the Chief if this had EAB input.

**Mr. Babcock** replied that the EAB will be happy to review and comment on the CERB response to The Ocean Action Plan.

## 5. PRESENTATION BY THE EAB TO THE CHIEF OF ENGINEERS

**Mr. Babcock** presented the status of the various sub-themes the EAB is working on in response to the Chief's charges under the overarching theme of Ecosystem Restoration Through Water Resources Management.

Sub theme update –

- a. The EAB report on Independent Scientific Review is completed and posted on the Corps EAB webpage.
- b. The Environmental Benefits and Performance Measures sub-themes have been combined. The EAB will provide the Chief a report and recommendations at the December meeting of the EAB.
- c. The EAB has completed the Regulatory Improvements Initiative, but want to see the jurisdiction consistency review. In addition, the EAB has continuing concerns on wetlands, which was discussed later.
- d. The EAB completed the "Environmental Restoration Authority Gaps" final report earlier, which stated that the Corps has adequate restoration authority.
- e. The EAB has developed a draft framework to apply outreach and partnering in the conduct of its business and will provide it to chief at December meeting.
- f. The final sub-theme was re-oriented towards a recommendation of an Ecosystem Restoration Center. The EAB will provide recommendations on the center and continues to believe that a center is needed to assist the field and to create partnerships in the ecosystem restoration community. The center needs to be a center of learning with dedicated resources. The center should be a conduit for partnerships with other agencies, non-governmental organizations, and academia. The EAB will further develop and provide a formal proposal.

**Mr. Babcock** stated that the EAB will work on a plan for its assistance to you over the next few years. He also said that the board would be submitting a formal letter to the Chief regarding wetland protection, which they believe has been reduced as a result of the U.S. Supreme Court decisions -- SWANCC in 2001 and the very-recent Rapanos-Carabell decision, June 2006. The EAB is concerned that the present situation of wetland protection is allowing a net loss of wetlands, more specifically, that the administrative guidelines are not achieving No Net Loss, despite Administration objectives to restore three million acres of wetlands. Their letter will provide recommendations for the Interim Guidance that is expected to be released in the next few weeks.

## 6. CLOSING REMARKS AND ADJOURNMENT

**General Strock** stated that there were no registered comments and asked if there were any who wanted to make public comments. There were none.

**General Strock** responded to the EAB presentation recognizing the need for interim guidance. The EAB recommendations will be considered. He had a final question to the EAB regarding the hurricanes of 2005, stating that he would like the EAB members to review the "Twelve Points" that are being developed by the Army and the Corps. Mr. Babcock indicated they would review them, particularly with the Chief's Environmental Operating Principles in mind.